

# PATENT ABSTRACTS OF JAPAN

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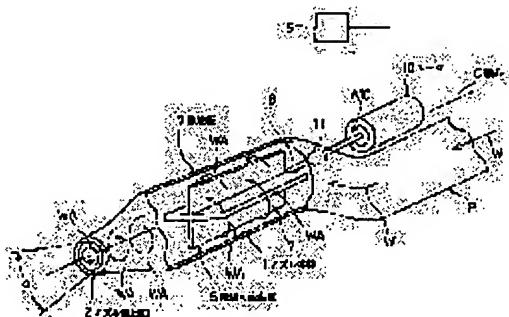
## (54) NON-STAGE VARIABLE SPRAY NOZZLE

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To control the rotational speed of straightening plates to arbitrarily adjust a spray angle and also to secure a required range on rotation stoppage of the straightening plates by arranging the straightening plates extending in the axial direction on a rotating shaft coaxially arranged with a nozzle body in the nozzle body having a jetting port.

**SOLUTION:** When water W is forcibly fed into a pump P, the water W is passed through a nozzle body 1 of a non-stage variable device 5 and is discharged from a nozzle jetting port 2. At this time, a motor 10 is rotated in the direction of the arrow A10 to rotate straightening plates 7 of the non-stage variable device 5 in the same direction.

Thus the water W passed through the nozzle body 1 is given rotational force in the direction of the arrow WA by the straightening plates 7, and is sprayed at a prescribed spray angle  $\alpha$  while it is turned into a turning flow. The rotation speed of the non-stage variable device 5 is arbitrarily controlled by a controller 15 for the motor 10. On the other hand, when the rotation of the non-stage variable device 5 is stopped, the water flowing down in the nozzle body 1 is discharged straight from the nozzle jetting port 2 without being turned.



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